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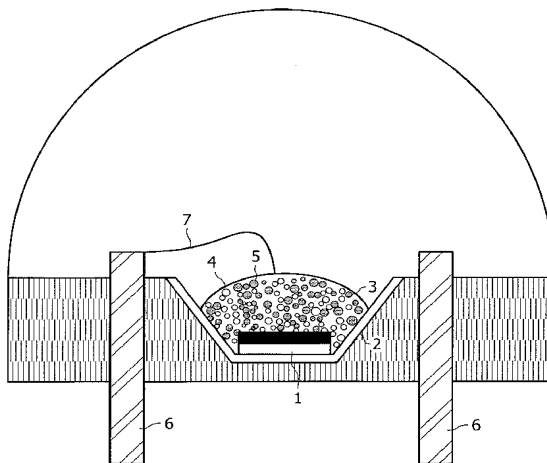
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(54) Title: ILLUMINATION SYSTEM COMPRISING A RADIATION SOURCE AND A FLUORESCENT MATERIAL



(57) Abstract: PCT/IB2005/050521 25 PHDE040060 ABSTRACT: 25 The invention concerns an illumination system, comprising a radiation source and a fluorescent material comprising at least one phosphor capable of absorbing a part of light emitted by the radiation source and emitting light of wavelength different from that of the absorbed light; wherein said at least one phosphor is a yellow red-emitting cerium-activated carbido-nitridosilicate of general formula  $(RE_{1-z})_{2-a}EA_aSi_4N_{6+a}C_{1-a}:Ce_z$ , wherein  $0 \leq a < 1$ ,  $0 < z \leq 0.2$ , EA is at least one earth alkaline metal selected from the group of calcium, strontium and barium, and RE is a least one rare earth metal chosen from the group of yttrium, gadolinium and lutetium. The invention is also concerned with a red to yellow -emitting cerium 10 activated carbido-nitridosilicate of general formula  $(RE_{1-z})_{2-a}EA_aSi_4N_{6+a}C_{1-a}:Ce_z$  wherein  $0 \leq a < 1$ ,  $0 < z \leq 0.2$ , EA is at least one earth alkaline metal selected from the group of calcium, strontium and barium, and RE is a least one rare earth metal chosen from the group of yttrium, gadolinium and lutetium.

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